

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/006625

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K38/17 A61K39/395 A61K48/00 C07K14/705 C07K16/28
G01N33/53

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 834 565 A (SMITHKLINE BEECHAM CORP) 8 April 1998 (1998-04-08) page 18, line 51 - page 22, line 32; claims 15-20	1-9, 14, 15
X	WO 03/033661 A (LOGAN THOMAS JOSEPH ; GALVIN KATHERINE M (US); MILLENNIUM PHARM INC (U) 24 April 2003 (2003-04-24) page 60, line 10 - page 69, line 21; claims 1,2 page 74, line 14 - page 78, line 4	1-9, 14, 15
X	WO 96/39442 A (FULDNER REBECCA A ; HUMAN GENOME SCIENCES INC (US); LI YI (US)) 12 December 1996 (1996-12-12) page 32, line 13 - line 31; claims 13-20 page 23, line 9 - page 25, line 13	1-9, 14, 15
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

3 November 2004

Date of mailing of the international search report

15/11/2004

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ZHU K ET AL: "Sphingosylphosphorylcholine and Lysophosphatidylcholine are ligands for the G Protein-coupled Receptor GPR4" JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 276, no. 44, 2 November 2001 (2001-11-02), pages 41325-41335, XP002974915 ISSN: 0021-9258 the whole document	1-9,14, 15
A	WO 01/73026 A (SILOS SANTIAGO IMMACULADA ; GLUCKSMANN MARIA (US); MILLENNIUM PHARM IN) 4 October 2001 (2001-10-04) page 2, line 26 - line 29	1-9,14, 15
A	DONG X ET AL: "A DIVERSE FAMILY OF GPCRS EXPRESSED IN SPECIFIC SUBSETS OF NOCICEPTIVE SENSORY NEURONS" CELL, CELL PRESS, CAMBRIDGE, MA, US, vol. 5, no. 106, 7 September 2001 (2001-09-07), pages 619-632, XP001071234 ISSN: 0092-8674 the whole document	1-9,14, 15
P,X	LUDWIG MARIE-GABRIELLE ET AL: "Proton-sensing G-protein-coupled receptors." NATURE. 4 SEP 2003, vol. 425, no. 6953, 4 September 2003 (2003-09-04), pages 93-98, XP002303706 ISSN: 1476-4687 the whole document	1-9,14, 15

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 10-13
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 10-13

Present claims 10-13 relate to a compounds defined by reference to a desirable characteristic or property, namely antagonists or agonists of the polypeptides of claims 1 to 4.

The claims cover all compounds having this characteristic or property, whereas the application provides no support within the meaning of Article 6 PCT and/or no disclosure within the meaning of Article 5 PCT for such compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the compound by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/006625

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0834565	A	08-04-1998	US 5912335 A	15-06-1999
			EP 0834565 A2	08-04-1998
			JP 10201485 A	04-08-1998
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			WO 03033661 A2	24-04-2003
			US 2003109044 A1	12-06-2003
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			CN 1193980 A	23-09-1998
			WO 9639442 A1	12-12-1996
			AU 714642 B2	06-01-2000
			AU 2820495 A	24-12-1996
			EP 0832126 A1	01-04-1998
			JP 11506341 T	08-06-1999
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			EP 1402030 A2	31-03-2004
			WO 0173026 A2	04-10-2001
			US 2003124670 A1	03-07-2003
			US 2003215860 A1	20-11-2003